

## **X-RAY FLUORESCENCE AND X-RAY DIFFRACTION IN THE IRON AND STEEL INDUSTRY- CURRENT AND FUTURE DEVELOPMENTS AND APPLICATIONS**

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The iron and steel industry was one of the earliest users of the X-ray Fluorescence (XRF) technique, around fifty years ago. However, the days of measuring just a few elements with reasonable precision have long been superseded by use of powerful systems with a wide range of flexible capabilities.

This presentation will look at the development of analytical systems where requirement is not simply for “an XRF instrument”, but for a solution to the specific analytical task facing the laboratory. Extension of the XRF technique to provide overall “solutions” will cover the following areas of technology:-

- Simultaneous WD XRF plus Sequential WD XRF
- WD XRF plus X-ray diffraction
- Light element detection
- Medium Power dedicated X-ray systems
- X-ray systems as part of dedicated automated laboratories

In addition to giving examples of the current state-of-the-art, a view of how these systems might develop for the future will also be presented.